

Date 5-18-81

No. D- 1

Supercedes Date _____

COST OF CLOSURE ESTIMATE
DRUM STORAGE FACILITY
PHILADELPHIA WORKS

A. Name or number of storage pad PLANT PAD

B. Maximum gallons (permitted capacity) 112,500 (2250 drums)

C. Cost per drum to send to disposal (including freight) by waste type (use additional sheets if there is more than 3 waste streams):

1. Waste stream Paint Waste Solids (WCF# WOP-01)

a. Max. No. of drums: 240

b. Disposal now at: Cecos International
Williamsburg, Ohio

c. Current contract cost/drum (delivered) \$ 78 (incl cost of dru

d. Total Cost (AXC) \$ 18720

2. Waste stream Epoxy Can Coating/Wash (WCF# WOP #3)

a. Max. No. of drums: 60

b. Disposal now at: Chambers Works
Deepwater, NJ

c. Current contract cost/drum (delivered) \$ 24 (by 3000 gal T/W

d. Total Cost (AXC) \$ 1440 Pittsburgh Pipe)

3. Waste stream _____ (WCF# _____)

a. Max. No. of drums: _____

b. Disposal now at: _____

c. Current contract cost/drum (delivered) \$ _____

d. Total Cost (AXC) \$ _____

D. Decontamination Cost

The estimated cost for clean-up of storage pad (scrape, wash, flush, dry with absorbent, etc. -- or whatever is needed) of any spill, leak, drip, or residue of the stored hazardous waste: \$ 100
+ Cost of Prof. Eng. 25
\$ 125

E. Total cost of closure (C1d, C2d, etc., plus D) \$ 20,285.00

Date 5-18-81

No. D- 2

Supercedes Date _____

COST OF CLOSURE ESTIMATE
DRUM STORAGE FACILITY
PHILADELPHIA WORKS

A. Name or number of storage pad R&D PAD

B. Maximum gallons (permitted capacity) 37,500 (750 Drums)

C. Cost per drum to send to disposal (including freight) by waste type (use additional sheets if there is more than 3 waste streams):

1. Waste stream Aqueous Paint Waste (WCF# WOP10)
(OW-1017)

a. Max. No. of drums: 60
b. Disposal now at: Chambers Works via Pittsburgh Pipe (T/T)
Deepwater, NJ

c. Current contract cost/drum (delivered) \$ 42
d. Total Cost (AXC) \$ 2520

2. Waste stream Paint Waste Solid (WCF# WOP-1)

a. Max. No. of drums: 80
b. Disposal now at: Cecos International
Williamsburg, Ohio

c. Current contract cost/drum (delivered) \$ 78 (incl. \$10 for drum)
d. Total Cost (AXC) \$ 6240

3. Waste stream _____ (WCF# _____)

a. Max. No. of drums: _____
b. Disposal now at: _____

c. Current contract cost/drum (delivered) \$ _____
d. Total Cost (AXC) \$ _____

D. Decontamination Cost

The estimated cost for clean-up of storage pad (scrape, wash, flush, dry with absorbent, etc. -- or whatever is needed) of any spill, leak, drip, or residue of the stored hazardous waste: \$ 100
Insp. by Prof. Eng. 25

\$125

E. Total cost of closure (C1d, C2d, etc., plus D) \$ 8,885

Date: 5-18-81

No. T.- 1

Supercedes Date: _____

COST OF CLOSURE ESTIMATE

TANK STORAGE FACILITY

PHILADELPHIA WORKS

- A. Name or number of storage tank(s) 2 Waste Solvent Storage Tanks.
- B. Maximum gallons (permitted capacity) 6000 each.
- C. Cost per gallon to send to disposal (including freight; use additional sheets if there is more than 1 tank unless all tank contents are the same):
1. Waste stream Spent Solvent (WCF# WOP-5).
 2. No T/W to Drain 2.
 3. No. drums for tank bottom material 6.
 4. a - Disposal Liquid as: Solvent Recovery Service, Linden, N. J.
b - Disposal Solids at: CECOS International, Williams Burg, Ohio.
 5. Current Contract Cost of disposal:
a - Liquid \$1160
b - Solid \$ 384
c - Cost of drums \$60
- TOTAL COST: \$1604
- D. Decontamination Cost
- The estimated cost to thoroughly remove all traces (in addition to costs in C above):
1. Labor (plant or contract) Plant \$800 - Contract \$300.
 2. Materials (to neutralize, flush, etc.) \$0.
 3. Drums (see C3, 5 & 6 above)
 4. Other Proc. Eng Fee \$50
- E. Total cost of closure (C7 plus D 1, 2, & 4) \$2754.

cc: EPA Regional Administrator, Region III
R. W. Laurelli - Marshall Lab, Phila.



E. I. DU PONT DE NEMOURS & COMPANY
INCORPORATED
WILMINGTON, DELAWARE 19898

FINISHES & FABRICATED PRODUCTS DEPARTMENT

December 17, 1982

Mr. Larry Lusk, Supervisor
Solid Waste Regional Facilities
Pennsylvania Department of Environmental Resources
1875 New Hope Street
Norristown, PA 19401

Dear Mr. Lusk:

This letter constitutes formal notice of our intent to close our RCRA Interim Status Hazardous Waste Management (HWM) facility at 3500 Grays Ferry Avenue, Philadelphia, PA 19146 (EPA ID No. PAD 002311884). The only HWM activity at this site is storage in containers and two tanks. The site will continue to be a regular generator of hazardous waste, maintaining its EPA ID Number and be subject to 40 CFR 262, 25 PA Code Chapter 75 and other appropriate regulations.

This site now is only a research and development facility with laboratory and semi-works operations. Previously, the majority of the site was a paint production plant, which was shut down early this year. The need for longer term storage (over 90 days) no longer exists. Firm contracts with off-site RCRA approved HWM (disposal) facilities allow us to comply with the 90-day rule for R&D wastes. Small quantities of laboratory waste have negated our need for the bulk tank storage of dirty wash solvent (F003, F005).

Pursuant to 40 CFR 265.112(c) and 25 PA Code 75.265 (o) (5), we are submitting to you for approval a current copy of our site's Closure Plan. Our intended start of closure is June 1, 1983. At that time, all waste left on the site will be shipped to an RCRA HWM facility for disposal under contract and our facilities decontaminated as per the Closure Plan. Certification of closure will jointly be made by our site manager and an independent registered professional engineer.

We look forward to your prompt approval to proceed with this closure. If you allow us to do so, we are prepared to commence closure in the Spring -- earlier than the 180-day minimum notice date of June, 1983.

RECEIVED
RCRA PERMITS & PESTICIDES SECT

DEC 22 1982

EPA, R3

RECEIVED
DEC 21 1982
EPA, REGION III
OFFICE OF REGIONAL ADMINISTRATION

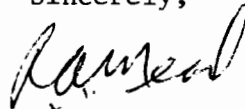
Mr. Larry Lunsik, Supervisor
Pennsylvania Department of Environmental Resources
Page 2
December 17, 1982

If you have any questions, you can reach me by phone at
(302) 774-3891 or by mail at:

R. A. Mead
E. I. du Pont de Nemours & Company
Finishes and Fabricated Products Department
B-2303
1007 Market Street
Wilmington, DE 19898

A copy of this letter of intent is also being sent to USEPA, Region III
Administrator (without Closure Plan attachment).

Sincerely,

A handwritten signature in dark ink, appearing to read 'RAM', is written over the printed name 'R. A. Mead'.

R. A. Mead
Environmental Protection Coordinator

RAM/dmp

Amended December 13, 1982

CLOSURE PLAN
HAZARDOUS WASTE STORAGE FACILITY

I. General

A. Purpose

This plan outlines the steps required to close an Interim Status RCRA Storage facility. Included are plans for off-site disposal of all stored waste and decontamination of all surfaces.

B. Applicable Regulations

This plan complies with the provisions of 40 CFR Part 265, Sub-Part G. - Closure and Post-Closure, for Interim Status Hazardous Storage Facilities. Specific Sections to be addressed are:

1. Sections 265.111- 265.115; these can be found at 46 FR 2875 (January 12, 1981).
2. Section 265.197 found at 45 FR 33245 (May 19, 1980).

C. Organization

This plan covers both general requirements and specific tasks for various types of storage as is appropriate for this site in these sections.

- II. Closure Performance Standard
- III. Administrative Requirements
- IV. Time of Closure
- V. Schedule of Closure
- VI. Disposal
- VII. Decontamination
- VIII. Certification
- IX. Cost Estimates
- X. Specific Closure Activity

A. Drum Pads

B. Storage Tanks

II. Closure Performance Standard

The environmental standard which governs all hazardous waste management (HWM) facility closings is given in Section 265.111:

"The owner or operator must close his facility in a manner that:

- (a) Minimizes the need for further maintenance, and
- (b) Controls, minimizes or eliminates, to the extent necessary to protect human health and the environment, post-closure escape of hazardous waste, hazardous waste constituents, leachate, contaminated rainfall, or waste decomposition products to the ground or surface waters or to the atmosphere."

III. Administrative Requirements

Certain record keeping and other administrative duties relative to closure are specified for the owner-operator of a HWM facility (see Section 265.112).

- A. This plan must be complete by May 19, 1981, but may be revised at any time during the active life of the facility.
- B. It must be amended with 60 days of changes in:
 - 1. Operating plans or facility design which affect the closure plan;
 - 2. Change in the expected year of closure.
- C. The written plan and all amendments must be available at the facility until closed and certified.
- D. The maximum inventory of waste storage must be documented. (See Section X).
- E. The plan must be submitted to the Regional EPA or State Administrator at least 180 days before expected closure.
- G. The cost of closure must be updated annually.

IV. Time of Closure

This storage facility is on the site of an active laboratory facility for which there has been no forecasted closure. It has been receiving all Hazardous Waste generated on the site prior to shipment off-site for disposal. The estimated closure time for the HW facility is June, 1983.

V. Schedule of Closure

- A. The schedule of closure is a list of steps -- some of which are required by regulations -- which include both administrative and physical closing actions.

B. The steps of closure are:

<u>Time</u>	<u>Step</u>
1. November, 1982	Determine closure is to occur
2. December, 1982	Make any amendments needed; prepare copy for Regional EPA
3. December, 1982	Submit copy to Regional DER for approval (Section 75.265(o)(5)
4. March, 1983	DER must have approved or rejected
5. March - May, 1983	Conclude contracts, contact P.E., plan shipments
6. June, 1983	Start closure
7. September, 1983	Complete closure; obtain certification

VI. Disposal

A. This section of the plan outlines specifically the disposal site where each Hazardous Waste stream will go and in what type containers. An amendment is necessary whenever the site designated is changed for any reason.

B. The waste streams and their disposal are:

1. Waste paint liquid containing solvents, resins, and pigment (D001) from laboratory and semi-works operations will be shipped in drums to Ross Incineration Services, Grafton, OH under existing contract OP-0974.
2. Contaminated monomers, solvents, or resins containing toxic or carcinogenic material from semi-works operations will be shipped in drums to Ross Incineration Services after approval by Ross Incineration Services of waste characterization forms submitted for each material.
3. Aqueous waste paint liquid from laboratory and semi-works operations will be shipped by tank wagon to E. I. DuPont Chambers Works, Deepwater, N.J. (D007 & D008).
4. Hazardous Waste Solids (D007 & D008), containing no free liquids, and consisting of dry pigment, bags which contained lead and/or chromate pigments, waste sand from grinding units, dried paint, gelled resins, filter bags, etc. will be shipped in drums to Cecos International, Niagara Falls, N.Y. or Williamsburg, OH. under contract OP-0977.

VII. Decontamination

A. This section of the plan outlines who will do the necessary decontamination of the storage facilities at closure.

B. The facilities and who will decontaminate are:

1. Storage Pads - Decontamination will be handled by laboratory work force.

2. Storage Tanks - Decontamination was handled by plant forces after plant shutdown.

VIII. Certification

When closure is completed, the owner or operator must submit to the Regional Administrator certification both by the owner or operator and an independent registered professional engineer that the facility has been closed in accordance with the specifications in the approved closure plan.

IX. Cost Estimates

- A. Regulations require a cost estimate for all costs of carrying out the closure plan be prepared in current (Spring 1981) dollars and escalated or upgraded annually (Section 265.142 (c), 46 FR 2878, January 12, 1981).

The attached cost estimation sheet(s) cover(s) all the steps in closure of this site and proper disposal of all hazardous waste material on-site at on off-site HWM facility.

- B. Estimates are to allow for the maximum inventory as discussed in Section III-D and listed in Section X (by type of storage).
- C. Amended or updated sheets are attached in front of the older estimates by type of storage.

X. Specific Closure Activity

The specific steps necessary to close this facility are:

A. Drum Storage Pad Closure

1. Inspect all drums for readiness to ship:
 - a. DOT markings
 - b. Leaks
2. Correct any deficiencies found in 1.
3. Prepare manifest(s) and apply RCRA warning labels.
4. Ship all drums to a permitted Hazardous Waste Management (HWM) facility (See VI B)
5. Inspect pad for residues, drips, leaked material
6. Clean up any material found in 5.
7. Remove any markings referring to hazardous waste storage.

8. Have Professional Engineer review it.
9. File certifications of closure.

B. Storage Tank Closure (Ref: Section 265.197)

1. Remove all hazardous waste to drums or bulk carrier by normal pumping plus gravity draining.
2. Flush as may be required and/or wash with caustic solution to remove residue.
3. Inspect tank, lines, pumps, etc., to insure cleanliness.
4. If sludges, dried residues, etc., are present, prepare tank for entry, dismantle lines, etc.; scrape and clean as necessary.
5. Ship all drainings, flushings and residues to a permitted hazardous waste management facility.
6. Remove all HW markings from the tank and lines.
7. Inspect with Professional Engineer.
8. File certificates of closure.

REVISED CLOSURE COST ESTIMATES

PHILADELPHIA WORKS

5-18-82

All 1981 estimates escalated by 1.09 factor.

Date 5-18-82

No. D- 1

Supersedes Date 5-18-81

COST OF CLOSURE ESTIMATE
DRUM STORAGE FACILITY
PHILADELPHIA WORKS

A. Name or number of storage pad PLANT PAD

B. Maximum gallons (permitted capacity) 112,500 (2250 drums)

C. Cost per drum to send to disposal (including freight) by waste type (use additional sheets if there is more than 3 waste streams):

1. Waste stream Paint Waste Solids (WCF# WOP-01)

a. Max. No. of drums: 240

b. Disposal now at: Cecos International
Williamsburg, Ohio

c. Current contract cost/drum (delivered) \$ 78 (incl cost of dr

d. Total Cost (AXC) \$ 18720

2. Waste stream Epoxy Can Coating/Wash (WCF# WOP #3)

a. Max. No. of drums: 60

b. Disposal now at: Chambers Works
Deepwater, NJ

c. Current contract cost/drum (delivered) \$ 24 (by 3000 gal T/W
Pittsburgh Pipe)

d. Total Cost (AXC) \$ 1440

3. Waste stream _____ (WCF# _____)

a. Max. No. of drums: _____

b. Disposal now at: _____

c. Current contract cost/drum (delivered) \$ _____

d. Total Cost (AXC) \$ _____

D. Decontamination Cost

The estimated cost for clean-up of storage pad (scrape, wash, flush, dry with absorbent, etc. -- or whatever is needed) of any spill, leak, drip, or residue of the stored hazardous waste: \$ 100
+ Cost of Prof. Eng. 25

\$ 125

E. Total cost of closure (C1d, C2d, etc., plus D) \$ 20,285.00

$$1.04 \times 20,285 = 22,111$$

Date 5-18-82

No. D- 2

Supercedes Date 5-18-81

COST OF CLOSURE ESTIMATE
DRUM STORAGE FACILITY
PHILADELPHIA WORKS

- A. Name or number of storage pad R&D PAD
- B. Maximum gallons (permitted capacity) 37,500 (750 Drums)
- C. Cost per drum to send to disposal (including freight) by waste type (use additional sheets if there is more than 3 waste streams):
1. Waste stream Aqueous Paint Waste (WCF# WOP10)
(OW-1017)
- a. Max. No. of drums: 60
- b. Disposal now at: Chambers Works via Pittsburgh Pipe (T/I)
Deepwater, NJ
- c. Current contract cost/drum (delivered) \$ 42
- d. Total Cost (AXC) \$ 2520
2. Waste stream Paint Waste Solid (WCF# WOP-1)
- a. Max. No. of drums: 80
- b. Disposal now at: Cecos International
Williamsburg, Ohio
- c. Current contract cost/drum (delivered) \$ 78 (incl. \$10 for dr
- d. Total Cost (AXC) \$ 6240
3. Waste stream _____ (WCF# _____)
- a. Max. No. of drums: _____
- b. Disposal now at: _____
- c. Current contract cost/drum (delivered) \$ _____
- d. Total Cost (AXC) \$ _____
- D. Decontamination Cost
- The estimated cost for clean-up of storage pad (scrape, wash, flush, dry with absorbent, etc. -- or whatever is needed) of any spill, leak, drip, or residue of the stored hazardous waste: \$ 100
- Insp. by Prof. Eng. 25
- \$125
- E. Total cost of closure (Cld, C2d, etc., plus D) \$ ~~8,885~~

$1.09 \times 8885 = 9685$

Date: 5-18-82

No. T. 1

Supercedes Date: 5-18-81

COST OF CLOSURE ESTIMATE

TANK STORAGE FACILITY

PHILADELPHIA WORKS

- A. Name or number of storage tank(s) 2 Waste Solvent Storage Tanks.
- B. Maximum gallons (permitted capacity) 6000 each.
- C. Cost per gallon to send to disposal (including freight; use additional sheets if there is more than 1 tank unless all tank contents are the same):
1. Waste stream Spent Solvent (WCF# WOP-5).
 2. No T/W to Drain 2.
 3. No. drums for tank bottom material 6.
 4. a - Disposal Liquid as: Solvent Recovery Service, Linden, N. J.
b - Disposal Solids at: CECOS International, Williams Burg, Ohio.
 5. Current Contract Cost of disposal:
 - a - Liquid \$1160
 - b - Solid \$ 384
 - c - Cost of drums \$60
- TOTAL COST: \$1604

D. Decontamination Cost

The estimated cost to thoroughly remove all traces (in addition to costs in C above:

1. Labor (plant or contract) Plant \$800 - Contract \$300.
 2. Materials (to neutralize, flush, etc.) \$0.
 3. Drums (see C3, 5 & 6 above)
 4. Other Proc. Eng Fee \$50
- E. Total cost of closure (C7 plus D 1, 2, & 4) \$2754.

$$1.09 \times 2754 = \$3002$$

INITIAL CLOSURE COST ESTIMATES

PHILADELPHIA WORKS

5-18-81

REVISED CLOSURE COST ESTIMATES

MARSHALL R&D LABORATORY

12-12-82

Estimates based on current contract costs. Lower volume is the result of plant closing.

Date 12-13-82

No. D- 1

Supercedes Date 5-18-82

COST OF CLOSURE ESTIMATE
DRUM STORAGE FACILITY
MARSHALL R&D LABORATORY

- A. Name or number of storage pad PLANT PAD
- B. Maximum gallons (permitted capacity) 112,500 (2250 Drums)
- C. Cost per drum to send to disposal (including freight) by waste type (use additional sheets if there is more than 3 waste streams):
1. Waste stream Waste Paint Liquid (WCF#)
 - a. Max. No. of drums: 80
 - b. Disposal now at: Ross Incineration Services
Grafton, OH
 - c. Current contract cost/drum (delivered) \$ 78 (Incl. Drum)
 - d. Total Cost (AXC) \$ 6240
 2. Waste stream Hazardous Waste Solids (WCF# WOP-01,07)
 - a. Max. No. of drums: 80
 - b. Disposal now at: Cecos International
Williamsburg, OH or Niagara Falls, N.Y.
 - c. Current contract cost/drum (delivered) \$ 76 (Incl. Drum)
 - d. Total Cost (AXC) \$ 6080
 3. Waste stream Misc. Waste Monomers, Etc. (WCF# MLW-XX)
 - a. Max. No. of drums: 80
 - b. Disposal now at: Ross Incineration Services
Grafton, OH
 - c. Current contract cost/drum (delivered) \$ 83 (Incl. Drum)
 - d. Total Cost (AXC) \$ 6640
 4. See Attachment
- D. Decontamination Cost
- The estimated cost for clean-up of storage pad (scrape, wash, flush, dry with absorbent, etc. -- or whatever is needed) of any spill, leak, drip, or residue of the stored hazardous waste: \$ 100
+ Insp. by Prof. Engr. 25
125
- E. Total cost of closure (C1d, C2d, etc., plus D) \$ 21,605

4. Waste Stream Aqueous Waste Paint Liquid (WCF #WOP10)

a. Max. No. of Drums 60

b. Disposal now at E. I. DUPONT - CHAMBERS WORKS
DEEPWATER, N.J.

c. Current Contract Cost/Drum (Delivered) \$ 42 (By T/W)

d. Total Cost (AXC) \$ 2520

No. D- 2

COST OF CLOSURE ESTIMATE
DRUM STORAGE FACILITY
MARSHALL R&D LABORATORY

- A. Name or number of storage pad R&D PAD
- B. Maximum gallons (permitted capacity) 37,500 (750 Drums)
- C. Cost per drum to send to disposal (including freight) by waste type (use additional sheets if there is more than 3 waste streams):

- d. Total Cost (A_{XC}) \$ 0

- d. Total Cost (AxC) - \$

- d. Total Cost (AxC) \$

The estimated cost for clean-up of storage pad (scrape, wash, flush, dry with absorbent, etc. -- or whatever is needed) of any spill, leak, drip, or residue of the stored hazardous waste: \$ 100

+ Insp. by Prof. Engr. 25
\$125

- This lot is no longer used because there is adequate space on Plant storage pad due to plant closing.

Date 12-12-82

No. T 1

Supersedes Date 5-18-82

COST OF CLOSURE ESTIMATE
TANK STORAGE FACILITY
MARSHALL R&D LABORATORY

A. Name or number of storage tank(s) 2 Waste Solvent Storage Tanks

B. Maximum gallons (permitted capacity) 6000 each

C. Cost per gallon to send to disposal (including freight; use additional sheets if there is more than 1 tank unless all tank contents are the same):

1. Waste stream Spent Solvent (WCF# WOP-5)

2. No. of drums to drain (maximum) 0

3. Estimated No. of drums for decontamination material 0

4. Disposal now at: _____

5. Current contract cost per drum (delivered): R\$ _____

6. Current cost of drum to be used: \$ _____ each

7. Total cost: $(2 + 3) \times (5 + 6) = \$$ 0

D. Decontamination Cost

The estimated cost to thoroughly remove all traces (in addition to costs in C above:

1. Labor (plant or contract) \$ 0

2. Materials (to neutralize, flush, etc.) \$ 0

3. Drums (see C3, 5 & 6 above) 0

4. Other Engr. Fee \$ 50

E. Total cost of closure (C7 plus D 1,2,& 4) \$ 50

Plant labor force drained and caustic washed tanks
as part of plant shutdown.